



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : BOLLEY F.

Serial : N° 09/471,501

Filed 12/23/1999

Examiner : Pechhold, A.

Art Unit : 3673

For : HYBRID RISER OR PIPE FOR FLUID TRANSFER

I, Daniel AVERBUCH, being duly warned, declare and say as follows :

THAT, I am a French citizen holding the title of Engineer by the "Ecole Nationale des Ponts et Chaussées", Paris-France, and a PhD of "Structural Engineering" at ENPC (Paris).

THAT, I am the head of the « Mechanical Engineering Unit » of the Institut Français du Pétrole, where I am employed since 1997.

THAT, I am a specialist of flexible pipe line design in the field of transportation of hydrocarbon products.

THAT :

We declare that, in the field of the extraction of petroleum effluent, the term "flexible riser" is clearly defined and must be understood as a riser having a structure comprising an internal pressure sheath made of extruded polymer and armor made by metallic wires wound around the internal pressure sheath. A flexible riser is notably defined by the document API Recommended Practice 17B which is accepted as an authority by the petroleum industry. The internal structure of a flexible riser provides the feature of great bending capacity along the full length of the flexible riser.

On the contrary, a "rigid riser" must be understood as a riser constituted by a continuous tubular metallic pipe which confers great stiffness to the riser.

The undersigned declares further that all statements made herein of his own knowledge are true and that all statements made on information and belief are believed to be true : and further that these statements are made with the knowledge that willful false statements and the like so made were punishable by fine or imprisonment, or both under Section 1001 of Title 18 of United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.



Rueil, April 5, 2002